



1600

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/937,862B

DATE: 10/09/2003

TIME: 12:20:10

Input Set : A:\W124859.txt  
 Output Set: N:\CRF4\10092003\I937862B.raw

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4 <110> APPLICANT: Oberste, M. Steven
5     Maher, Kajja
6     Kilpatrick, David R.
7     Pallansch, Mark A.
10 <120> TITLE OF INVENTION: TYPING OF HUMAN ENTEROVIRUSES
13 <130> FILE REFERENCE: 14114.0353U2
15 <140> CURRENT APPLICATION NUMBER: 09/937,862B
16 <141> CURRENT FILING DATE: 2001-09-28
18 <150> PRIOR APPLICATION NUMBER: PCT/US00/07828
19 <151> PRIOR FILING DATE: 2000-03-24
21 <150> PRIOR APPLICATION NUMBER: 60/127,464
22 <151> PRIOR FILING DATE: 1999-03-31
24 <160> NUMBER OF SEQ ID NOS: 89
26 <170> SOFTWARE: FastSEQ for Windows Version 4.0
28 <210> SEQ ID NO: 1
29 <211> LENGTH: 20
30 <212> TYPE: DNA
31 <213> ORGANISM: Artificial Sequence
33 <220> FEATURE:
34 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
35     synthetic construct
38 <400> SEQUENCE: 1
39 gcrtgcaatg ayttctcwgt
41 <210> SEQ ID NO: 2
42 <211> LENGTH: 18
43 <212> TYPE: DNA
44 <213> ORGANISM: Artificial Sequence
46 <220> FEATURE:
47 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
48     synthetic construct
W--> 51 <221> NAME/KEY: misc_feature
52 <222> LOCATION: (1)...(18)
53 <223> OTHER INFORMATION: n = a, t, c or g
W--> 55 <400> 2
W--> 56 ngcnccdgat tgntgscc
58 <210> SEQ ID NO: 3
59 <211> LENGTH: 20
60 <212> TYPE: DNA
61 <213> ORGANISM: Artificial Sequence
63 <220> FEATURE:
64 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
65     synthetic construct
W--> 68 <221> NAME/KEY: misc_feature

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18

RAW SEQUENCE LISTING  
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69 <222> LOCATION: (1)...(20)  
 70 <223> OTHER INFORMATION: n = a, t, c or g  
**W--> 72 <400> 3**  
**W--> 73 gcncnngayt gntgnccraa** 20  
 75 <210> SEQ ID NO: 4  
 76 <211> LENGTH: 20  
 77 <212> TYPE: DNA  
 78 <213> ORGANISM: Artificial Sequence  
 80 <220> FEATURE:  
 81 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 synthetic construct  
**W--> 85 <221> NAME/KEY: misc\_feature**  
 86 <222> LOCATION: (1)...(20)  
 87 <223> OTHER INFORMATION: n = a, t, c or g  
**W--> 89 <400> 4**  
**W--> 90 atgtaygtnc cnccnngngg** 20  
 92 <210> SEQ ID NO: 5  
 93 <211> LENGTH: 20  
 94 <212> TYPE: DNA  
 95 <213> ORGANISM: Artificial Sequence  
 97 <220> FEATURE:  
 98 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 synthetic construct  
**W--> 102 <221> NAME/KEY: misc\_feature**  
 103 <222> LOCATION: (1)...(20)  
 104 <223> OTHER INFORMATION: n = a, t, c or g  
**W--> 106 <400> 5**  
**W--> 107 ggngcrttnc cytcngtcca** 20  
 109 <210> SEQ ID NO: 6  
 110 <211> LENGTH: 20  
 111 <212> TYPE: DNA  
 112 <213> ORGANISM: Artificial Sequence  
 114 <220> FEATURE:  
 115 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 synthetic construct  
**W--> 119 <221> NAME/KEY: misc\_feature**  
 120 <222> LOCATION: (1)...(20)  
 121 <223> OTHER INFORMATION: n = a, t, c or g  
**W--> 123 <400> 6**  
**W--> 124 acrtgnncnng tytgcatngt** 20  
 126 <210> SEQ ID NO: 7  
 127 <211> LENGTH: 18  
 128 <212> TYPE: DNA  
 129 <213> ORGANISM: Artificial Sequence  
 131 <220> FEATURE:  
 132 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 synthetic construct  
**W--> 136 <221> NAME/KEY: misc\_feature**  
 137 <222> LOCATION: (1)...(18)

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138 <223> OTHER INFORMATION: n = a, t, c or g  
**W--> 140 <400> 7**  
**W--> 141 awnttytayg ayggntgg** 18  
 143 <210> SEQ ID NO: 8  
 144 <211> LENGTH: 20  
 145 <212> TYPE: DNA  
 146 <213> ORGANISM: Artificial Sequence  
 148 <220> FEATURE:  
 149 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 150 synthetic construct  
**W--> 153 <221> NAME/KEY: misc\_feature**  
 154 <222> LOCATION: (1)...(20)  
 155 <223> OTHER INFORMATION: n = a, t, c or g  
**W--> 157 <400> 8**  
**W--> 158 tananngtnc ccatrttrtt** 20  
 160 <210> SEQ ID NO: 9  
 161 <211> LENGTH: 20  
 162 <212> TYPE: DNA  
 163 <213> ORGANISM: Artificial Sequence  
 165 <220> FEATURE:  
 166 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 167 synthetic construct  
**W--> 170 <221> NAME/KEY: misc\_feature**  
 171 <222> LOCATION: (1)...(20)  
 172 <223> OTHER INFORMATION: n = a, t, c or g  
**W--> 174 <400> 9**  
**W--> 175 atgtayrtnc cnmcnngngc** 20  
 177 <210> SEQ ID NO: 10  
 178 <211> LENGTH: 20  
 179 <212> TYPE: DNA  
 180 <213> ORGANISM: Artificial Sequence  
 182 <220> FEATURE:  
 183 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 184 synthetic construct  
**W--> 187 <221> NAME/KEY: misc\_feature**  
 188 <222> LOCATION: (1)...(20)  
 189 <223> OTHER INFORMATION: n = a, t, c or g  
**W--> 191 <400> 10**  
**W--> 192 gngngnggrt cngtnakytt** 20  
 194 <210> SEQ ID NO: 11  
 195 <211> LENGTH: 20  
 196 <212> TYPE: DNA  
 197 <213> ORGANISM: Artificial Sequence  
 199 <220> FEATURE:  
 200 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 201 synthetic construct  
**W--> 204 <221> NAME/KEY: misc\_feature**  
 205 <222> LOCATION: (1)...(20)  
 206 <223> OTHER INFORMATION: n = a, t, c or g

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Input Set : A:\W124859.txt

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W--> 208 <400> 11  
 W--> 209 **gangaraayc tnatngarac** 20  
 211 <210> SEQ ID NO: 12  
 212 <211> LENGTH: 19  
 213 <212> TYPE: DNA  
 214 <213> ORGANISM: Artificial Sequence  
 216 <220> FEATURE:  
 217 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 218 synthetic construct  
 W--> 221 <221> NAME/KEY: misc\_feature  
 222 <222> LOCATION: (1)...(19)  
 223 <223> OTHER INFORMATION: n = a, t, c or g  
 W--> 225 <400> 12  
 W--> 226 **cccatnakrt cnatrtccc** 19  
 228 <210> SEQ ID NO: 13  
 229 <211> LENGTH: 20  
 230 <212> TYPE: DNA  
 231 <213> ORGANISM: Artificial Sequence  
 233 <220> FEATURE:  
 234 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 235 synthetic construct  
 W--> 238 <221> NAME/KEY: misc\_feature  
 239 <222> LOCATION: (1)...(20)  
 240 <223> OTHER INFORMATION: n = a, t, c or g  
 W--> 242 <400> 13  
 W--> 243 **gtrctyacna nnagrtcyct** 20  
 245 <210> SEQ ID NO: 14  
 246 <211> LENGTH: 19  
 247 <212> TYPE: DNA  
 248 <213> ORGANISM: Artificial Sequence  
 250 <220> FEATURE:  
 251 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 252 synthetic construct  
 W--> 255 <221> NAME/KEY: misc\_feature  
 256 <222> LOCATION: (1)...(19)  
 257 <223> OTHER INFORMATION: n = a, t, c or g  
 W--> 259 <400> 14  
 260 tsaarytgca aargacac 19  
 262 <210> SEQ ID NO: 15  
 263 <211> LENGTH: 18  
 264 <212> TYPE: DNA  
 265 <213> ORGANISM: Artificial Sequence  
 267 <220> FEATURE:  
 268 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 269 synthetic construct  
 W--> 272 <221> NAME/KEY: misc\_feature  
 273 <222> LOCATION: (1)...(18)  
 274 <223> OTHER INFORMATION: n = a, t, c or g  
 W--> 276 <400> 15

**RAW SEQUENCE LISTING**  
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Input Set : A:\W124859.txt  
 Output Set: N:\CRF4\10092003\I937862B.raw

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277 stgycagat ttcaagtgt          18
279 <210> SEQ ID NO: 16
280 <211> LENGTH: 20
281 <212> TYPE: DNA
282 <213> ORGANISM: Artificial Sequence
284 <220> FEATURE:
285 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
286     synthetic construct
W--> 289 <221> NAME/KEY: misc_feature
290 <222> LOCATION: (1)...(20)
291 <223> OTHER INFORMATION: n = a, t, c or g
W--> 293 <400> 16
W--> 294 ggnacncayr tnathtgggaa      20
296 <210> SEQ ID NO: 17
297 <211> LENGTH: 20
298 <212> TYPE: DNA
299 <213> ORGANISM: Artificial Sequence
301 <220> FEATURE:
302 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
303     synthetic construct
W--> 306 <221> NAME/KEY: misc_feature
307 <222> LOCATION: (1)...(20)
308 <223> OTHER INFORMATION: n = a, t, c or g
W--> 310 <400> 17
W--> 311 gccntrttnt grtgncraa      20
313 <210> SEQ ID NO: 18
314 <211> LENGTH: 20
315 <212> TYPE: DNA
316 <213> ORGANISM: Artificial Sequence
318 <220> FEATURE:
319 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
320     synthetic construct
W--> 323 <221> NAME/KEY: misc_feature
324 <222> LOCATION: (1)...(20)
325 <223> OTHER INFORMATION: n = a, t, c or g
W--> 327 <400> 18
W--> 328 ggnacncayr tnrtntggaa      20
330 <210> SEQ ID NO: 19
331 <211> LENGTH: 20
332 <212> TYPE: DNA
333 <213> ORGANISM: Artificial Sequence
335 <220> FEATURE:
336 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
337     synthetic construct
W--> 340 <221> NAME/KEY: misc_feature
341 <222> LOCATION: (1)...(20)
342 <223> OTHER INFORMATION: n = a, t, c or g
W--> 344 <400> 19
W--> 345 acngcngyng aracnggnca      20

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RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/09/937,862B

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Input Set : A:\W124859.txt  
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:2; N Pos. 1,4,13  
Seq#:3; N Pos. 3,6,12,15  
Seq#:4; N Pos. 9,12,15,18  
Seq#:5; N Pos. 3,9,15  
Seq#:6; N Pos. 6,8,9,18  
Seq#:7; N Pos. 3,15  
Seq#:8; N Pos. 3,5,6,9  
Seq#:9; N Pos. 9,12,15,18  
Seq#:10; N Pos. 3,6,12,15  
Seq#:11; N Pos. 3,12,15  
Seq#:12; N Pos. 6,12  
Seq#:13; N Pos. 9,11,12  
Seq#:16; N Pos. 3,6,12  
Seq#:17; N Pos. 4,9,15  
Seq#:18; N Pos. 3,6,12,15  
Seq#:19; N Pos. 3,6,9,15,18  
Seq#:20; N Pos. 3,6,9,15,18  
Seq#:21; N Pos. 6,9,15,18  
Seq#:22; N Pos. 2,5,8,11  
Seq#:81; Xaa Pos. 3,5  
Seq#:82; Xaa Pos. 3  
Seq#:83; Xaa Pos. 3  
Seq#:84; Xaa Pos. 7  
Seq#:86; Xaa Pos. 2,3,7

VERIFICATION SUMMARY  
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Input Set : A:\W124859.txt  
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L:51 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:55 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:2  
L:56 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0  
L:68 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:72 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:3  
L:73 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0  
L:85 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:89 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:4  
L:90 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0  
L:102 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:106 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:5  
L:107 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0  
L:119 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:123 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:6  
L:124 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0  
L:136 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:140 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:7  
L:141 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0  
L:153 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:157 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:8  
L:158 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0  
L:170 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:174 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:9  
L:175 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0  
L:187 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:191 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:10  
L:192 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0  
L:204 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:208 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:11  
L:209 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0  
L:221 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:225 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:12  
L:226 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0  
L:238 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:242 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13  
L:243 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0  
L:255 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:259 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:14  
L:272 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:276 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:15  
L:289 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:293 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:16  
L:294 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0  
L:306 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:310 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:17  
L:311 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0  
L:323 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:327 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:18

**VERIFICATION SUMMARY**

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Input Set : A:\W124859.txt

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L:328 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0  
L:340 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:344 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:19  
L:345 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0  
L:357 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:361 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:20  
L:362 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0  
L:374 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:378 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:21  
L:379 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0  
L:391 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:395 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:22  
L:396 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0  
L:1972 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:1976 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:81  
L:1977 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:81 after pos.:0  
L:1990 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:1994 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:82  
L:1995 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82 after pos.:0  
L:2008 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:2012 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:83  
L:2013 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:83 after pos.:0  
L:2026 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:2030 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:84  
L:2031 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:84 after pos.:0  
L:2058 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:2062 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:86  
L:2063 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:86 after pos.:0